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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary

Application No.

10/535,239

Applicant(s)

TAKEMOTO ET AL.

Examiner

Kenan Cehic

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :01/31/2006, 08/17/2005,05/17/2005.

DETAILED ACTION

Claim Objections

1. Claim 1-19,22,-26, 28,29 objected to because of the following informalities:

For claim 1, "a channel band" in line 9 ,seems to refer back to claim 1 line 3. If this is true it is suggest to applicant to change this limitation —said channel bad—.Similar problems exist in claim 1 lines 13, claim 2 line 3 ad 5, claim 4 line 3, claim 5 lines 4, 5,6, claim 8 line 2, claim 10 line 4, claim 12 line 4, claim 17 line 3, claim 25 line 3, Dependent claims are objected since they depend on objected claims.

. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1-19,22,-26, 28,29 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 1, the claim limitation "the channel band calculated" lacks antecedent basis. It is not know which calculated channel band the applicant is referring to.

Claims 2-19,22,-26, 28,29 are rejected since they depend on rejected claims.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 28,29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

For claim 28, the claim limitation “program causing a compute to execute and operation” in line 1, is not a process, machine, manufacture, or composition of matter, or any new and useful improvement thereof because there is no physical structure/connection of medium recited in the claims. To overcome this rejection, it is suggested to change “program causing a compute to execute and operation” to - - computer readable medium encoded with computer program - -.

For claim 29, the claim limitation “storage medium containing a network relay program” in line 1, is not a process, machine, manufacture, or composition of matter, or any new and useful improvement thereof because there is no physical structure/connection of medium recited in the claims. To overcome this rejection, it is suggested to change “storage medium containing a network relay program” to - - computer readable medium encoded with computer program - -.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1-3,5,12,17,22,23,28,29 is rejected under 35 U.S.C. 102(b) as being anticipated by Yoshiaki (EP0969628).

For claim 1, Yoshiaki discloses a network relay device (see Figure 1, 3110) connected to a first communications network (see Figure 1, 3110, 3102, 3101 "IEEE 1394" or "Radio Network", 3120, 3110) and a second communications network (Figure 1, "Radio Network", 3120, 3110 or , 3110, 3102, 3101 "IEEE 1394") with which said device (see Figure 1, 3110) can transmit data after securing a channel band (see column 60 lines 36 through column 61 line 45 "acquires channel A on the radio network....bandwidth is set...base station 9110 transfers the converted image data to the channel a on the radio network"), said device including a first network interface (see Figure 1, 3110, "IEEE 1394") where said device is connected (see Figure 1, 3110, 3102, 3101) to the first communications network (see Figure 1, 3110, 3102, 3101) and a second network interface (see Figure 1, 3110, "Radio Interface") where said device (see Figure 1, 3110) is connected to the second communications network (see Figure 1, 3110, 3120 and section 0122 lines 1-15 "connected by a radio interface"); said device (see Figure 1, 3110) comprising: an event/state detecting section (see Figure 11, 3110, 4005, 4002) for detecting an event and/or a state (see column 60 line 36 through column 61 line 10 "packets ...are about to be received....connection command....connection between...base station node") regarding the first communications network (see column 60 line 36 through column 61 line 10 "1394 node....packets ...are about to be received....connection command....connection between...base station node") via the first network interface (see Figure 1, 3110, "IEEE 1394") ; a communications resource determination section (see Figure 11, 3110, 4005, 4002) for determining a channel band (see column 60 lines 36 through column 61 line 15 "bandwidth is set to be the value notified....10Mbps") to be obtained (see column 60 lines 36 through column 61 line 15 "bandwidth is set to be the value notified....10Mbps"), changed (see column 60 lines 36 through column 61 line 15 "bandwidth is set to be the value notified....10Mbps"), or **released** in the second communications network (see column 60 lines 36 through column 61 line 20 "base

station node...channel ...on the radio network” and Figure 1 “Radio Network”), in accordance with the event and/or the state (see section column 60 line 36 through column 61 line 20 “packets ...are about to be received....connection command....acquire channel...bandwidth is set”), regarding the first communications network (see column 60 line 36 through column 61 lines 20 “The 1394 node” and Figure 1, 3110, 3102,3101 “IEEE 1394”), detected by the event/state detecting section (see Figure 11, 3110, 4005, 4002); and a communications resource management section (see Figure 11, 3110, 4005, 4002) for obtaining (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be the value notified....10Mbps...packets are to be transmitted....channel A”), changing (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be the value notified....10Mbps...packets are to be transmitted....channel A”), a channel band (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be the value notified....10Mbps”) in the second communications network (see column 60 lines 36 through column 61 line 20 “base station node...channel ...on the radio network” and Figure 1 “Radio Network”) via the second network interface (see Figure 1, 3110, “Radio Interface”) on the basis of the channel band calculated (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be the value notified....10Mbps”) by the communications resource determination section (see Figure 11, 3110, 4005, 4002).

For claim 2, Yoshiaki discloses the first communications network (see Figure 1, 3110, 3102,3101 “IEEE 1394”) is a communications network (see Figure 1, 3110, 3102,3101 “IEEE 1394”) with which said device (see Figure 1, 3110) can transmit data after securing a channel band see column 60 lines 36 through column 61 line 45 “acquires channel A on the radio network....bandwidth is set...base station 9110 transfers the converted image data to the channel a on the radio network”), and the event and/or the state (see column 60 line 36 through column 61

line 10 "packets ...are about to be received....connection command....connection between...base station node"), regarding the first communications network (see column 60 line 36 through column 61 line 10 "1394 node....packets ...are about to be received....connection command....connection between...base station node") , detected by the event/state detecting section (see Figure 11, 3110, 4005, 4002) is obtaining (see column 60 line 36 through column 61 line 40 "node 9101...acquires Isochronous channel...bandwidth is set to be 10Mbps"), change (see column 60 line 36 through column 61 line 40 "node 9101...acquires Isochronous channel...bandwidth is set to be 10Mbps"), of a channel band (see column 60 line 36 through column 61 line 40 "node 9101...acquires Isochronous channel...bandwidth is set to be 10Mbps") in the first communications network (see Figure 1, 3110, 3102,3101 "IEEE 1394" and column 60 lines 36-60 "1394 node"), or a channel band obtaining state (see column 60 line 36 through column 61 line 40 "node 9101...acquires Isochronous channel...bandwidth is set to be 10Mbps"), for data to be transferred (see column 60 line 36 through column 61 line 10 "packets ...are about to be received....connection command....connection between...base station node" and column 60 line 36 through column 61 line 45 "node 9101 transmits the image data...image data to be transferred on the radio network....transfers the converted image data to the channel...radio network....received video data") between (see column 60 line 36 through column 61 line 10 "packets ...are about to be received....connection command....connection between...base station node" and column 60 line 36 through column 61 line 45 "node 9101 transmits the image data...image data to be transferred on the radio network....transfers the converted image data to the channel...radio network....received video data") the first communications network (see Figure 1, 3110, 3102,3101 "IEEE 1394") and the second communications network (Figure 1, "Radio Network", 3120, 3110) .

For claim 3, Yoshiaki discloses the event and/or the state (see column 60 line 36 through column 61 line 10 “packets ...are about to be received....connection command....connection between...base station node”) , regarding the first communications network (see column 60 line 36 through column 61 line 10 “1394 node....packets ...are about to be received....connection command....connection between...base station node”), detected by the event/state detecting section (see Figure 11, 3110, 4005, 4002) is reception or completed reception of data (see column 60 line 36 through column 61 line 40 “transfers the...command ...to the base station...extracts the command frame from the received packet”) itself to be transferred data (see column 60 line 36 through column 61 line 40 “transfers the...command ...to the base station...extracts the command frame from the received packet....base station...transfers the command...to the radio terminal”) from the first communications network (see Figure 1, 3110, 3102,3101 “IEEE 1394”) to the second communications network (Figure 1, “Radio Network”, 3120, 3110).

For claim 5, Yoshiaki discloses the first communications network (see Figure 1, 3110, 3102,3101 “IEEE 1394”) is a communications network (see Figure 1, 3110, 3102,3101 “IEEE 1394”) with which said device (see Figure 1, 3110) can transmit data after securing a channel band (see column 60 lines 36 through column 61 line 45 “ “acquires channel A on the radio network....bandwidth is set...base station 9110 transfers the converted image data to the channel a on the radio network”), and the communications resource determination (see Figure 11, 3110, 4005, 4002) section calculates a channel band (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be the value notified....10Mbps”) in the second communications network (see column 60 lines 36 through column 61 line 20 “base station node...channel ...on the radio network” and Figure 1 “Radio Network”), on the basis of a channel band obtained (see column 60 lines 36-60 “1394 node...or the base station node...acquires the Isochronous channel X on the

IEEE 1394 bus”), changed (see column 60 lines 36-60 “1394 node...or the base station node...acquires the Isochronous channel X on the IEEE 1394 bus”), in the first communications network (see column 60 lines 36-60 “the IEEE 1394 bus”).

For claim 12, Yoshiaki discloses a network management section (see column 39 line 41 through column 41 line 35 “node 601”) for detecting (see column 39 line 41 through column 41 line 35 “handoff processing...to communication node 601 is started”) a communications resource management station (see column 39 line 41 through column 40 line 35 “radio terminal”) which manages a channel band (see column 39 line 41 through column 40 line 35 “radio resource between the communication node...and the radio terminal...is reserved.... radio terminal ...notifies the handoff information....to communication node 601”) in the second communications network (Figure 1, “Radio Network”), wherein from which communications station (see column 39 line 41 through column 40 line 35 “radio terminal”) on the second communications network (Figure 1, “Radio Network”) serves as the communications resource management station(see column 39 line 41 through column 40 line 35 “radio resource between the communication node...and the radio terminal...is reserved.... radio terminal ...notifies the handoff information....to communication node 601”), detected by the network management section (see column 39 line 41 through column line 35 “node 601”), the communications resource management section (see column 39 line 41 through column 40 line 35 “radio terminal”) judges whether said network relay device (see column 39 line 41 through column 41 line 35 “handoff processing....change the node to be connected”) is to is to request other communications station (see column 39 line 41 through column 40 line 35 “radio resource between the communication node...and the radio terminal...is reserved.... radio terminal ...notifies the handoff information....to communication node 601”) on the

second communications network (Figure 1, "Radio Network") to obtain (see column 39 line 41 through column 40 line 35 "radio resource between the communication node...and the radio terminal...is reserved.... radio terminal ...notifies the handoff information....to communication node 601"), change , a channel band (see column 39 line 41 through column 40 line 35 "radio resource between the communication node...and the radio terminal...is reserved.... radio terminal ...notifies the handoff information....to communication node 601").

For claim 17, Yoshiaki discloses the communications resource management section obtains (see column 42 lines 1-20 "turning back ...to ch_Y"), changes (see column 42 lines 1-20 "turning back ...to ch_Y"), or releases (see column 42 lines 1-15 "ch_x is disconnected") a channel band (see column 42 "ch_X....CH_Y") in the second communications network (Figure 1, "Radio Network", 3120, 3110 or , 3110, 3102,3101 "IEEE 1394") , after a lapse of a given time (see column 42 lines 1-15 "prescribed period of time") from detection of a network state "connect,disconnect..request for start data....received") in the first communications network network (see Figure 1, 3110, 3102,3101 "IEEE 1394" or "Radio Network", 3120, 3110).

For claim 22, Yoshiaki discloses the first communications network (see Figure 1, 3110, 3102,3101 "IEEE 1394" or "Radio Network", 3120, 3110) or the second communications network (see Figure 1, 3110, 3102,3101 "IEEE 1394" or "Radio Network", 3120, 3110) is in conformity with IEEE 1394 (see Figure 1, 3110, 3102,3101 "IEEE 1394").

For claim 23, Yoshiaki discloses the first communications network (see Figure 1, 3110, 3102,3101 "IEEE 1394" or "Radio Network", 3120, 3110) or the second

communications network (see Figure 1, 3110, 3102, 3101 “IEEE 1394” or “Radio Network”, 3120, 3110) is a wireless network (see Figure “Radio Network”, 3120, 3110).

For claim 28, Yoshiaki discloses a network relay (see Figure 1, 3110) program (see column 63 lines 40-45 “software program”) causing a computer (see column 63 lines 40-45 “software program...nodes...terminals” and section 0292 lines 1-10 section 0292 “computer...perform discloses function and process..”) to execute an operation (see column 63 lines 40-45 “embodiments”) of the network relay device (see Figure 1, 3110).

For claim 29, Yoshiaki discloses a storage medium (see section 0292 lines 1-10 “storage medium”) containing a network relay program (see section 0291, 0292 lines 1-10 “software program”) causing a computer (see section 0291 lines 1-10 “a computer to perform”) to execute an operation (see section 0292 “computer...perform discloses function and process..”) of the network relay device (see Figure 1, 3110)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of Garg et al. (2004/0008627).

For claim 4, Yoshiaki discloses the claimed invention as described in paragraph 4.

For claim 4, Yoshiaki discloses the communications resource determination section (see Figure 11, 3110, 4005, 4002) calculates, on a channel band (see column 60 lines 36 through column 61 line 15 "IEEE 1394 bus.....bandwidth is set to be 10 Mbps....requested bandwidthbandwidth is set to be the value notified....10Mbps"), a band required band (see column 60 lines 36 through column 61 line 15 "requested bandwidthbandwidth is set to be the value notified....10Mbps") for communications of the data group (see column 60 lines 36 through

column 61 line 45 “acquires channel A on the radio network...bandwidth is set...base station 9110 transfers the converted image data to the channel a on the radio network”) in the second communications network (Figure 1, “Radio Network”, 3120, 3110 or , 3110, 3102,3101 “IEEE 1394”).

Yoshiaki is silent about:

For claim 4, channel band obtained by measurement of data group received from the first communications network

Garg from the same or similar field of endeavor discloses a communication network with the following features:

For claim 4, channel band (see section 0058 lines 1-10 “bandwidth”) obtained by measurement (see section 0058 lines 1-10 “monitors the traffic....computes the bandwidth”) of data group (see section 0058 lines 1-10 “each flow”) received from the first communications network (see section 0058 lines 1-10 “traffic to an from the wireless network”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki by using the features, as taught Garg, in order to provide a technique for measuring network capacity and for providing admission control in a wireless network (see section 0006 and 0007)

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of An (US 2001/0040919).

For claim 6, Yoshiaki discloses the claimed invention as described in paragraph 4.

Furthemore, for claim 6 Yoshiaki discloses, the communications resource determination section (see Figure 11, 3110, 4005, 4002) obtains a bandwidth (see column 60 lines 36 through

column 61 line 15 “bandwidth is set to be 10 Mbps.....bandwidth is set to be the value notified....10Mbps”) through the channel band obtained (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be 10 Mbps.....bandwidth is set to be the value notified....10Mbps”), changed (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be 10 Mbps.....bandwidth is set to be the value notified....10Mbps”), in the first communications network (see Figure 1, 3110, 3102, 3101 “IEEE 1394” or “Radio Network”, 3120, 3110), and then calculates the channel band (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be the value notified....10Mbps”) in the second communications network (see column 60 lines 36 through column 61 line 20 “base station node...channel ...on the radio network” and Figure 1 “Radio Network”) on the basis of the obtained bandwidth (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be the value notified....10Mbps”).

Yoshiaki is silent about:

For claim 6, estimates a bandwidth of data transmitted through the channel band obtained, changed, in the first communications network,

An from the same or similar field of endeavor discloses a communication network with the following features:

For claim 6, An discloses estimates a bandwidth (see section 0027 lines 1-10 “estimated data transmission rate”) of data transmitted (see section 0027 lines 1-17 “bandwidth is allocated...transmission”) through the channel band obtained (see section 0027 lines 1-17 “bandwidth is allocated”), changed (see section 0027 lines 1-17 “bandwidth is allocated”), in the first communications network (see section 0037 lines 1-20 “IEEE 1394”),

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki by using the features, as taught An, in order to efficiently utilize the bandwidth of the IEEE 1394 buss (see section 0006 and 0007).

7. Claim 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of Teramoto et al (US 6,885,643).

For claim 7, Yoshiaki discloses the claimed invention as described in paragraph 4.

Furthermore, for claim 7 Yoshiaki discloses, the communications resource determination section (see Figure 11, 3110, 4005, 4002) calculates the channel band (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be the value notified....10Mbps”) to be secured (see column 60 lines 36 through column 61 line 15 “acquires channel A.....bandwidth is set to be the value notified....10Mbps”) in the second communications network (see column 60 lines 36 through column 61 line 15 “radio network....bandwidth is set to be the value notified....10Mbps”).

Furthermore, for claim 8 Yoshiaki discloses, the communications resource determination section (see Figure 11, 3110, 4005, 4002) calculates a channel band (see column 60 lines 36 through column 61 line 15 “bandwidth is set to be the value notified....10Mbps”) to be secured (see column 60 lines 36 through column 61 line 15 “acquires channel A.....bandwidth is set to be the value notified....10Mbps”) in the second communications network (see column 60 lines 36 through column 61 line 15 “radio network....bandwidth is set to be the value notified....10Mbps”), on the basis of (i) a channel band required (see column 60 lines 36 through column 61 line 15 “radio network....bandwidth is set to be the value notified....10Mbps”) for normal data

transmission (see column 60 lines 36 through column 61 line 15 “radio network....bandwidth is set to be the value notified....10Mbps”) in the second communications network (see column 60 lines 36 through column 61 line 15 “radio network....bandwidth is set to be the value notified....10Mbps”) and (ii) a channel band (see column 60 lines 36 through column 61 line 15 “radio network ...requested bandwidth....bandwidth is set to be the value notified....10Mbps”) required for data retransmission (see column 60 lines 36 through column 61 line 15 “radio network ...requested bandwidth....bandwidth is set to be the value notified....10Mbps”).

Yoshiaki is silent about:

For claim 7, with consideration of a property of the second communications network.

For claim 9, a communications state detecting section for detecting a communications state in the second communications network, wherein: the communications resource management section changes the channel band having been obtained in the second communications network, in accordance with a change in communications state of a band-obtained data in the second communications network.

Teramoto from the same or similar field of endeavor discloses a communication network with the following features:

For claim 7, Teramoto discloses with consideration (see column 12 lines 47-55 “wireless link condition information...changing he data transfer rate”) of a property (see column 3 lines 40-52 “consider....dynamically varying network condition”) of the second communications network (see column 3 lines 40-52 “wireless link”).

For claim 9, Teramoto discloses a communications state detecting section (see column 12 lines 25-55 "Link monitor processor...application processor") for detecting a communications state (see column 12 lines 25-55 "wireless link condition information") in the second communications network (see column 3 lines 40-52 "wireless link"), wherein: the communications resource management section (see column 12 lines 25-55 "application processor") changes the channel band having been obtained (see column 12 lines 25-55 "changing the data transfer rate") in the second communications network (see column 3 lines 40-52 "wireless link"), in accordance with a change (see column 3 lines 40-52 "consider....dynamically varying network condition") in communications state (see column 3 lines 40-52 "consider....dynamically varying network condition") of a band-obtained data (see column 3 lines 40-52 "consider....dynamically varying network condition") in the second communications network (see column 3 lines 40-52 "wireless link").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki by using the features, as taught Teramoto, in order to be able to select the AV data type and transfer rate usable based on the wireless link condition (see column 2 lines 11-40).

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of An (US 2001/0040919) as applied above to claim 9, further in view of Ma et al (US 2004/0001429).

For claim 10, Yoshiaki and An discloses the claimed invention as described in paragraph

7.

Yoshiaki and An are silent about:

For claim 10, the communications state detecting section detects an error rate of data transmission in the second communications network, and if the error rate exceed a given value, the communications resource management section increases a channel band having been obtained in the second communications network.

Ma et al from the same or similar field of endeavor discloses a communication network with the following features:

For claim 10, Ma discloses the communications state detecting section (see section 0259 lines 1-5 "base station") detects an error rate (see section 0259 lines 1-5 "detects...error rate") of data transmission (see section 0259 lines 1-5 "received data") in the second communications network (see Figure 1, 652,600,650,602,604), and if the error rate exceed a given value (see section 0259 lines 1-5 "error rate is higher...than target value"), the communications resource management section (see section 0259 lines 1-5 "base station") increases a channel band having been obtained (see section 0259 lines 1-5 "sends...command...increase the transmit rate") in the second communications network (see Figure 1, 652,600,650,602,604).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki and An by using the features, as taught Ma, in order to provide quality of service and features required in cellular networks that support multiple-user access (see section 0009-0011).

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of An (US 2001/0040919) as applied to claim 9 above, further in view of Igarashi et al (US 2007/0184839).

For claim 11, Yoshiaki and An discloses the claimed invention as described in paragraph 7.

Yoshiaki and An are silent about:

For claim 11, the communications state detecting section detects a data communications time in the second communications network, and as a result of comparison between the data communications time and a time given by an already allocated channel band, the communications resource management section changes the channel band obtained in the second communications network.

Igarashi from the same or similar field of endeavor discloses a communication network with the following features:

For claim 11, Igarashi discloses the communications state detecting section (see section 0105 "base station") detects a data communications time (see section 0105 "delay in reverse link") in the second communications network (see section 0105 "connection ...mobile station to a base station"), and as a result of comparison (see section 0105 "detected when ..not transmitted to ...within a predetermined time period") between the data communications time (see section 0105 "delay in reverse link...delay in a reverse line") and a time given (see section 0105 "predetermined time period") by an already allocated channel band (see section 0105 connection for transmitting data...predetermined time period"), the communications resource management section (see section 0105 "base station") changes the channel band obtained (see section 0105 "data rate of a corresponding connection is improved") in the second communications network (see section 0105 "connection ...mobile station to a base station").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki and An by using the features, as taught Igarashi, in order to provide a handoff method and a resource management where handoff is determined according to usage of resources in order to provide the most communication resources and high speed available (see section 0009-0013)

10. Claim 13, 14, 16, 18, 19 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of Takeda (US 6,512,767).

For claim 13, 14, 16, 18, 24 Yoshiaki discloses the claimed invention as described in paragraph X.

Yoshiaki is silent about:

For claim 13, Takeda discloses, the event/state detecting section receives information on network state from other communications device connected to the first network.

For claim 14, Takeda discloses the event/state detecting section requests information on network state to other communications device connected to the first network.

For claim 16, Takeda discloses the event/state detecting section checks a network state in the first communications network upon receipt of notification of a predetermined event from the first communications network.

For claim 18, the event/state detecting section detects, as the network state in the first communications network, presence or absence of other entity which communicates data with said device in the first communications network.

For claim 19, the event/state detecting section detects, as the network state in the first communications network, a connection established state in the first communications network.

For claim 24, the first communications network is in conformity with IEEE1394, and an event notified from the first communications network is a bus reset defined by the IEEE1394.

Takeda from the same or similar field of endeavor discloses a communication network with the following features:

For claim 13, the event/state detecting section (see Figure 8, 805 or 804 column 22 lines 1-12 “notification receiving means”) receives information (see column 22 lines 1-12 “notifies the detection to the notification receiving means”) on network state (see column 21 lines 39-64 “whether a node ...is connected “) from other communications device (see column 21 lines 39-64 “operation state notifying means”) connected to the first network (see column 21 lines 6-15 “IEEE 1394” and Figure 8 , 607 , 609, 802).

For claim 14, Takeda discloses the event/state detecting section (see Figure 8, 805 or 804 column 22 lines 1-12 “notification receiving means”) requests information (see column 21 lines 39-64 “receives a request “) on network state ((see column 21 lines 39-64 “whether a node ...is connected “) to other communications device (see column 21 lines 39-64 “request accepting means....transmission medium connecting device”) connected to the first network (see Figure 8 , 607,609).

For claim 16, Takeda discloses the event/state detecting section (see Figure 8, 805 or 804 column 22 lines 1-12 “notification receiving means”) checks a network state (see column 21 lines 39-64 “whether a node ...is connected “) in the first communications network (see Figure 8 , 607,609) upon receipt of notification (see column 21 lines 39-64 “issues a request”) of a predetermined event (see column 21 lines 39-64 “) from the first communications network (see Figure 8 , 607,609).

For claim 18, Takeda discloses the event/state detecting section (see Figure 8, 805 or 804 column 22 lines 1-12 “notification receiving means”) detects, as the network state (see column 21 lines 39-64 “whether a node ...is connected “) in the first communications network (see Figure 8 , 607,609), presence or absence of other entity state (see column 21 lines 39-64 “whether a node ...is connected “) which communicates data (see column 21 lines 40-20 “transferring a packet between the media”) with said device (see Figure 8, 801,804,805) in the first communications network (see Figure 8 , 607,609).

For claim 19, Takeda discloses the event/state detecting (see Figure 8, 805 or 804 column 22 lines 1-12 “notification receiving means”) section detects, as the network state (see column 21 lines 39-64 “whether a node ...is connected “) in the first communications network (see Figure 8 , 607,609), a connection established state (see column 21 lines 39-64 “whether a node ...is connected “) in the first communications network (see Figure 8 , 607,609).

For claim 24, Takeda discloses the first communications network (see Figure 8 , 607,609) is in conformity with IEEE1394 (see column 21 lines6-15 “IEEE 1394 interface”), and an event notified (see column 21 lines 54-65 “checking....in which a bus reset occurs....bus reset”) from the first communications network (see Figure 8 , 607,609) is a bus reset (see column 21 lines 54-65 “checking....in which a bus reset occurs....bus reset”) defined by the IEEE1394 (see column 21 lines6-15 “IEEE 1394 interface”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki by using the features, as taught Takeda, in order to provide a method where plural busses are connected to one another devices can operate normally (see column 6 lines 5-30).

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of Takeda (US 6,512,767) as applied to claim 14 above, further in view of Seki (US 2003/0018753).

For claim 15, Yoshiaki and Takeda disclose the claimed invention as in paragraph.

Yoshiaki and Takeda are silent about:

As regarding claim 15, the event/state detecting section checks a network state in the first communications network at regular intervals.

Seki from the same or similar field of endeavor disclose a communication network with the following features:

As regarding claim 15, Seki discloses the event/state detecting section (see section 0123 “gateway”) checks a network state (see section 0123 “check...apparatuses...collect information....state of theapparatus”) in the first communications network (see Figure 1, 7, “IEEE 1394”) at regular intervals (see section 0123 “regular time intervals”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki and Takeda by using the features, as taught Seki, in order to provide to be able to monitor the state continuously and to enable remote terminal to request using general protocols without specific control programs (see section 0017).

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of Ito et al (US 6,529,522).

For claim 20, Yoshiaki discloses a network relay device (see Figure 1, 3110) , connected to (i) a first communications network (see Figure 1, 3110, 3102,3101 “IEEE 1394”) with which said device can transmit data (see column 60 lines 36 through column 61 line 45 “ “acquires channel A on the radio network....bandwidth is set...base station 9110 transfers the converted image data to the channel a on the radio network”) after securing a communications resource (see column 60 lines 36 through column 61 line 45 “ “acquires channel A on the radio network....bandwidth is set...base station 9110 transfers the converted image data to the channel a on the radio network”) ii) a second communications network (Figure 1, “Radio Network”, 3120, 3110) having a property (see Figure 1, “Radio”) which is different (see section 0008 lines 1-5 “cable”) from that of the first communications network Figure 1, “Radio Network”, 3120, 3110) , said device (see Figure 1, 3110) including a first network interface (see Figure 1, 3110, “IEEE 1394”) where said device (see Figure 1, 3110) is connected (see Figure 1, 3110, 3102, 3101) to the first communications network (see Figure 1, 3110, 3102,3101) and a second network interface (see Figure 1, 3110, “Radio Interface”) where said device (see Figure 1, 3110) is connected to the second communications network (see Figure 1, 3110, 3120 and section 0122 lines 1-15 “connected by a radio interface” ; note connection), said device (see Figure 1, 3110) comprising:
a network component (see Figure 26, 5410) to which other communications station (see Figure 1, 3101,3102) connected to the first

communications network (see Figure 1, 3101,3102,3110, IEEE 1394) makes access so as to secure a channel band (see column 35 lines 18-25 “acquires ...isochronous channel....bandwidth of the isochronous channel...is equal to 10 Mbps”) on the first communications network (see column 35 lines 18-25 “IEEE 1394 bus”); and

For claim 21, Yoshiaki discloses the connection management section (see column 40 lines 15-37 “control node 611 and section 0193 lines 1-6 “communication node 602 to have the function of the control node “), upon receipt of a connection cut-off request (see column 40 lines 15-37 “disconnect command”) or a band release request (see column 40 lines 15-37 “disconnect command”) regarding a connection (see column 40 lines 15-37 “connection between the i_plug....decoder Sub”) having been set on (see column 40 lines 15-37 “connection between the i_plug....decoder Sub”) the first communications network (see column 35 lines 18-25 “IEEE 1394 bus”), disables the network component (see column 40 lines 15-37 “connection between....node 602 is disconnected”), on said network relay device (see column 40 lines 15-37 “communication node 602”), associated with the connection (see column 40 lines 15-37 “connection between the i_plug....decoder Sub”).

Yoshiaki is silent about:

For claim 20, Ito discloses a connection management section for controlling availability/unavailability of the network component.

Ito from the same or similar field of endeavor discloses:

For claim 20, a connection management section (see column 15 lines 38-50 “controller....1394 interface”) for controlling availability/unavailability (see column 15 lines 38-50 “controller....disable the function of the interface”) of the network component (see column 15 lines 38-50 “1394 interface”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki by using the features, as taught Ito, in order to control the power supply of the 1394 interface for power saving features and to be able to set up communication with devices of different standard (see column 2 lines 30-55).

13. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of Masunaga et al. (US 2002/0061025)

For claim 25, Yoshiaki discloses the claimed invention as described in paragraph.

Yoshiaki further disclose, for claim 25, the first communications network (see Figure 1, 3101,3102,3110, IEEE 1394) is in conformity with IEEE1394 (see Figure 1, 3101,3102,3110, IEEE 1394)

Yoshiaki is silent about:

As regarding claim 25, as a state of obtaining a channel band in the first communications network, used is a value of BANDWIDTH-AVAILABLE or CHANNELS-AVAILABLE register) held by an Isochronous Resource Manager in the first communications network.

Masunaga from the same or similar field of endeavor discloses an IEEE 1394 network with the following features:

As regarding claim 25, as a state of obtaining a channel band (see section 0027 "request...the desired channel and bandwidth") in the first communications network (see section 0020 IEEE 134 and Figure 3a), used is a value of BANDWIDTH-AVAILABLE (see section 0027 and 0028 "Bandwidth_Available") or CHANNELS-AVAILABLE register (see section 0027 and 0028 "Channels_Available") held by an Isochronous Resource Manager (see section 0027 "IRM") in the first communications network (see section 0020 IEEE 134 and Figure 3a).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki by using the features, as taught Masunaga, in order to comply with IEEE 1394 standards.

14. Claim 26, is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of Takeda et al. (US 2005/0163156)

For claim 26, Yoshiaki discloses the claimed invention as described in paragraph
Furthermore, for claim 26, Yoshiaki discloses the first communications network (see Figure 1, 3101,3102,3110, IEEE 1394) is in conformity with IEEE1394 (see Figure 1, 3101,3102,3110, IEEE 1394)

Yoshiaki is silent about:

As regarding claim 26, as the connection established state in the first communications network, used is a connection counter value of a Plug Control Register held by a data transmitting station or data receiving station in the first communications.

Takeda from the same or similar field of endeavor disclose a 1394 network with the following features:

As regarding claim 26, as the connection established state (see section 0012 lines 1-12 “connection state of the node”) in the first communications network (see Figure 1, 108,114), used is a connection counter value (see section 0154 lines 1-20 “PCR...connection counter”) of a Plug Control Register (see section 0154 lines 1-20 “PCR”) held by (see section 0154 lines 1-20 PCR....each nodes of P1394 has”) a data transmitting station (see section 0154 lines 1-5 “P1394 node” and section 0152 “packet...transmission” and Figure 1 125) or data receiving station (see section 0154 lines 1-5 “P1394 node” and Figure 1, 125) in the first communications network (see Figure 1, 108,114).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki by using the features, as taught Takeda, in order to comply with IEEE 1394 standards and in order to decrease hardware size and for the transmission medium to be effectively utilized (see section 0031-0034).

15. Claim 27, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiaki (EP0969628) in view of Ito et al (US 6,529,522), as applied to claim 20 above, in further view of Takeda et al. (US 2005/0163156)

As regarding claim 27, Yoshiaki and Ito disclose the claimed invention as described in paragraph.

Yoshiaki and Ito are silent about:

As regarding claim 27, the network component is any one of a register, a Plug Control Register, and a 1394node.

As regarding claim 30, resetting a structure of the first network is further carried out.

Takeda from the same or similar field of endeavor discloses:

As regarding claim 27, Takeda discloses the network component (see section 0154 lines 1-20 PCR....each nodes of P1394 has") is any one of a register (see section 0154 lines 1-20 PCR....each nodes of P1394 has"), a Plug Control Register (see section 0154 lines 1-20 PCR....each nodes of P1394 has"), and a 1394node (see section 0154 lines 1-20 PCR....each nodes of P1394 has").

As regarding claim 30, Takeda discloses resetting (see section 0012 lines 1-17 “bus reset”) a structure (see section 0012 lines 1-17 “node”) of the first network (see Figure 1, 108,114) is further carried out (see section 0012 lines 1-17 “bus reset generated”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Yoshiaki by using the features, as taught Takeda, in order to comply with IEEE 1394 standards and in order to decrease hardware size and for the transmission medium to be effectively utilized (see section 0031-0034).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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US-6,845,090 B1	01-2005	Takabatake et al.	370/338

The above are recited to show method and systems of wireless gateways.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenan Cehic whose telephone number is (571) 270-3120. The examiner can normally be reached on Monday through Friday 8:00-5:30.

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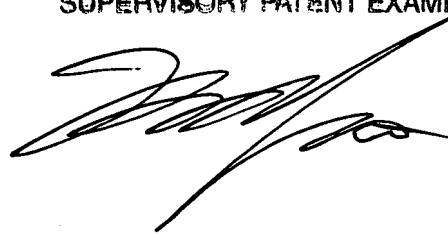
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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KC

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Kwang Bin Yao', is written over the printed name and title.